

extending well into Iowa. These two plants, although merging, seem fairly well defined. In Texas and Louisiana var. *longiflora* has often been mistaken for the more eastern Coastal Plain *R. noctiflora*. It is promptly distinguished, however, by its greatly developed villous-hirsute pubescence, *R. noctiflora* being puberulent; by its short and strongly hirsute-ciliate calyx-segments, those of *R. noctiflora* prolonged (2.5–4.5 cm. long) and puberulent; and by its short and glabrous capsule, the very long (2.25–3.5 cm. long) capsule of *R. noctiflora* pubescent.

As extreme as any variation of *Ruellia humilis* is var. *calvescens* (MAP 13), concentrated on the Cumberland Plateau, with colonies along the Alleghenies and the Great Smokies. Smaller in all parts than most members of the species and nearly glabrous, it has been mistaken (by the writer among others) for *Dyschoriste oblongifolia* (Michx.) Ktze. In their more upright extremes the two plants are often superficially similar, but the technical differences of calyx-segments and anthers hold. Furthermore, when the ripe seeds of *R. humilis*, var. *calvescens*, like those of all our species of *Ruellia*, are moistened they promptly exude mucilage which soon takes the form of prolonging and streaming spiracles which finally give the seed a more or less plush-like surface. Many tests of seeds of *Dyschoriste oblongifolia* have shown no such mucilage-spiracles there. The latter species, furthermore, is a plant of southern Coastal-Plain pine barrens and fall-line sands, northward to South Carolina (the old and doubted basis for it as Virginian, in the Gray Herbarium, being a specimen with copied—not original—label, reading “Southern States. Virginia”), not of calcareous upland.

(To be continued)

MARINE ALGAE OF THE MONTEREY PENINSULA¹.—Those who are interested in the seaweeds of the Pacific coast of the United States will receive with approval this book which, while dealing only with the marine algae of the Monterey region, is, nevertheless, usable for nearly all parts of that coast. The book should appeal especially to three groups of individuals, to all biologists, but particularly algologists, who will receive it with delight, to students in schools and colleges who are seeking an acquaintance with the plants of the coast, and to the more numerous group

¹ Marine Algae of the Monterey Peninsula by GILBERT M. SMITH, vii + 622 pp., with 98 plates. \$6.00, Stanford University Press. 1944.

of people who have a general interest in all that they see and a desire to learn more about seaweeds and to name them. To all of these, Prof. Smith's book should be easily and pleasantly useful.

In the introduction, many of the problems receiving the attention of students of this group of plants, and particularly the factors which affect their distribution, are treated. Here are discussed various factors, among them vertical distribution and horizontal (the latter, of course, referring to range along the coast) pointing out the importance of suitable substrata on which the plants can maintain themselves. In this connection, it would seem that a map of the Monterey region would be decidedly helpful. So also a more general treatment of the effects of temperature and of seasonal distribution would be very interesting to the general user of the book. Frequent statements show that these factors are important.

Extremely thorough and excellent is the discussion of the problems of collecting the different kinds of algae under various conditions. Unfortunately, no information is given as to the means of preservation of the material which has been collected, a point of particular interest to occasional collectors.

Especially helpful to the latter group and useful to all, is the glossary which is generally adequate and if anything errs on the side of too many definitions. But would there not be some who would appreciate definitions of such terms as parthenogenesis and whorl, and others who might question the significance of a zoospore defined as a "sport with flagella," one of the very few typographical errors occurring in the book?

Keys leading to the identification of any alga of the region are numerous and eminently satisfactory, and should make fairly easy and sure the determination of all specimens found, though it is a well-known fact that there must always be a certain number of plants that will exhibit misleading or confusing characters to baffle any collector. The numerous excellent illustrations make a decidedly helpful addition, clearly and beautifully showing the nature of nearly all the marine algae of this region.—ROY M. WHELDEN, Harvard University.

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